

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2005/003785

A. CLASSIFICATION OF SUBJECT MATTER  
Int.Cl<sup>7</sup> H01S3/06, 3/098

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
Int.Cl<sup>7</sup> H01S3/00-3/30Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
Jitsuyo Shinan Koho 1922-1996 Jitsuyo Shinan Toroku Koho 1996-2005  
Kokai Jitsuyo Shinan Koho 1971-2005 Toroku Jitsuyo Shinan Koho 1994-2005

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 4-357892 A (Nippon Telegraph And Telephone Corp.), 10 December, 1992 (10.12.92), Full text; all drawings (Family: none)	1-9
Y		10
X	KANG J.U., Broadband quasi-stationary pulses in mode-locked fiber ring laser, Optics Communications, 2000, Vol.182, No.4/6, pages 433 to 436	11-13,15
Y		1-10,14,16
X	JP 9-211508 A (Hitachi Cable, Ltd.), 15 August, 1997 (15.08.97), Fig. 6; Par. Nos. [0035] to [0036] (Family: none)	16
Y		14

 Further documents are listed in the continuation of Box C. See patent family annex.

\* Special categories of cited documents:  
 "A" document defining the general state of the art which is not considered to be of particular relevance  
 "E" earlier application or patent but published on or after the international filing date  
 "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  
 "O" document referring to an oral disclosure, use, exhibition or other means  
 "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  
 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art  
 "&" document member of the same patent family

Date of the actual completion of the international search  
02 June, 2005 (02.06.05)Date of mailing of the international search report  
28 June, 2005 (28.06.05)Name and mailing address of the ISA/  
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

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## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Motoharu MATSUURA et al., "Raman Soliton Ashshuku o Mochiita Supercontinuum-ko ni yoru Tahacho Pulse Seisei"; The Institute of Electronics, Information and Communication Engineers Gijutsu Kenkyu Hokoku, 26 September, 2003 (26. 09.03), Vol.103, No.350, pages 5 to 8	1-16
P,X	Kentaro YASUNAKA et al., "Er Doped Fiber Laser no Noise-like Mode Hasshin to Bunsan Taisei", 2004 Nen The Institute of Electronics, Information and Communication Engineers Sogo Taikai Koen Ronbunshu. Electronics 1, 08 March, 2003 (08.03.03), page 345	1-16

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**Box No. II      Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box No. III      Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

Whereas the inventions in claims 1-10 relate to a mode synchronizing fiber laser, the inventions in claims 11-16 relate to a noise-like pulse light source and a super continuum light generated thereby.

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

The additional search fees were accompanied by the applicant's protest.  
 No protest accompanied the payment of additional search fees.